

## II. Amendments to the Claims

This listing of claims replaces without prejudice all prior versions, and listings, of claims in the application:

### Listing of Claims:

Claims 1-23 (Cancelled).

24. (Currently Amended) An unexpanded stent comprising:

a tubular wall having a series of undulating circumferential portions;

the tubular wall also having a plurality of longitudinal portions connecting said series of undulating circumferential portions to form a porous, cylindrical surface; and

each longitudinal portion having a flexure member a  
~~flexure region within each longitudinal portion, said flexure~~  
member region, in two dimensions, being (i) non-sinusoidal, (ii) isolated with respect to at least one adjacent circumferential portion, and (iii) arcuate.

25. (Currently Amended) The stent of claim 24, wherein one or more of said plurality of longitudinal portions includes multiple flexure members ~~regions~~ within the same longitudinal portion.

26. (Currently Amended) The stent of claim 25, wherein said multiple flexure members ~~regions~~ within the same longitudinal portion have a same shape.

C2 27. (Currently Amended) The stent of claim 25, wherein said multiple flexure members ~~regions~~ within the same longitudinal portion have a different shape.

28. (Currently Amended) The stent of claim 25, wherein said multiple flexure members ~~regions~~ within the same longitudinal portion have a first lateral section and a second lateral section, and wherein the first lateral section and the second lateral section are present on the same side of the longitudinal portion.

29. (Currently Amended) The stent of claim 25, wherein said multiple flexure members ~~regions~~ within the same longitudinal portion have a first lateral section and a second lateral section, and wherein the first lateral section and the

second lateral section are present on different sides of the longitudinal portion.

30. (Currently Amended) The stent defined in claim 24, wherein a relative flexibility of the stent is variable in accordance with a thickness of at least one of the plurality of radially-expandable circumferential struts varying in the range of from about 0.0015 to about 0.0045 inches when measured on the outer surface of the tubular wall.

31. (Previously Presented) The stent defined in claim 24, further comprising a medicinal coating disposed thereon.

32. (Previously Presented) A stent system comprising a balloon catheter having an expandable portion, the expandable portion having disposed thereon the stent defined in claim 31.

33. (Currently Amended) The stent defined in claim 25, wherein said multiple flexure members ~~regions~~ within the same longitudinal portion have substantially the same shape and differing size.

34. (Currently Amended) The stent defined in claim 25, wherein said multiple flexure members ~~regions~~ within the same

longitudinal portion have differing shape and size.

35. (Currently Amended) The stent defined in claim 24, wherein the porous, cylindrical surface comprises a repeating pattern comprised of a polygon having a pair of side walls substantially parallel to a stent longitudinal axis, and wherein the flexure member ~~region~~ is disposed in each of the side walls.

36. (Previously Presented) The stent defined in claim 24, wherein the longitudinal portions are aligned in a spaced relationship parallel to a stent longitudinal axis.

C<sup>2</sup> 37. (Previously Presented) The stent defined in claim 24, wherein the longitudinal portions are aligned in an interconnected relationship parallel to a stent longitudinal axis.

38. (Previously Presented) The stent defined in claim 24, wherein the stent is constructed of stainless steel.

39. (Currently Amended) The stent defined in claim 24, wherein said flexure member ~~region~~, in two dimensions, has a width less than a width of said undulating circumferential portions when measured on the outer surface of the tubular wall.

40. (Currently Amended) The stent defined in claim 24, wherein said flexure member ~~region~~, in two dimensions, being isolated with respect to a pair of adjacent circumferential portions.

41. (Previously Presented) The stent defined in claim 24, wherein the stent is constructed of a self-expanding material which expands at a temperature of greater than about 30°C.

42. (Previously Presented) The stent defined in claim 41, wherein the self-expanding material expands at a temperature of in the range of from about 30° to about 40°C.

43. (Previously Presented) The stent defined in claim 24, wherein adjacent undulating circumferential portions have substantially the same profile.

44. (Previously Presented) The stent defined in claim 24, wherein adjacent undulating circumferential portions have substantially different profiles.

45. (Currently Amended) An unexpanded stent

comprising:

a tubular wall having a series of undulating circumferential portions;

the tubular wall also having a plurality of longitudinal portions connecting said series of undulating circumferential portions to form a porous, cylindrical surface; and

each of said plurality of longitudinal portions having a flexure member structure that provides lateral flexibility to said stent and is disposed within each of said plurality of longitudinal portions, each said flexure member structure, in two dimensions, being (i) non-sinusoidal, (ii) isolated with respect to adjacent circumferential portions, and (iii) arcuate.

46. (Currently Amended) The stent of claim 45, wherein one or more of said plurality of longitudinal portions includes multiple flexure members structures within the same longitudinal portion.

47. (Currently Amended) The stent of claim 46, wherein said multiple flexure members structures within the same longitudinal portion have a same shape.

48. (Currently Amended) The stent of claim 46,

wherein said multiple flexure members ~~structures~~ within the same longitudinal portion have a different shape.

49. (Currently Amended) The stent of claim 46, wherein said multiple flexure members ~~structures~~ within the same longitudinal portion have a first lateral section and a second lateral section, and wherein the first lateral section and the second lateral section are present on the same side of the longitudinal portion.

50. (Currently Amended) The stent of claim 46, wherein said multiple flexure members ~~structures~~ within the same longitudinal portion have a first lateral section and a second lateral section, and wherein the first lateral section and the second lateral section are present on different sides of the longitudinal portion.

51. (Previously Presented) The stent defined in claim 45, wherein a relative flexibility of the stent is variable in accordance with a thickness of at least one of the plurality of radially-expandable circumferential struts varying in the range of from about 0.0015 to about 0.0045 inches.

52. (Previously Presented) The stent defined in claim

45, further comprising a medicinal coating disposed thereon.

53. (Previously Presented) A stent system comprising a balloon catheter having an expandable portion, the expandable portion having disposed thereon the stent defined in claim 52.

54. (Currently Amended) The stent defined in claim 46, wherein said multiple flexure members ~~structures~~ within the same longitudinal portion have substantially the same shape and differing size.

c<sup>2</sup> 55. (Currently Amended) The stent defined in claim 46, wherein said multiple flexure members ~~structures~~ within the same longitudinal portion have differing shape and size.

56. (Previously Presented) The stent defined in claim 45, wherein the porous, cylindrical surface comprises a repeating pattern comprised of a polygon having a pair of side walls substantially parallel to a stent longitudinal axis, and wherein the flexure structures are disposed in each of the side walls.

57. (Previously Presented) The stent defined in claim 45, wherein the longitudinal portions are aligned in a spaced



relationship parallel to a stent longitudinal axis.

58. (Previously Presented) The stent defined in claim 45, wherein the longitudinal portions are aligned in an interconnected relationship parallel to a stent longitudinal axis.

59. (Previously Presented) The stent defined in claim 45, wherein the stent is constructed of stainless steel.

60. (Previously Presented) The stent defined in claim 45, wherein the stent is constructed of a self-expanding material.

61. (Previously Presented) The stent defined in claim 60, wherein the self-expanding material comprises nitinol.

62. (Previously Presented) The stent defined in claim 60, wherein the self-expanding material expands at a temperature of greater than about 30°C.

63. (Currently Amended) The stent defined in claim 45, wherein said flexure member structure, in two dimensions, has a

width less than a width of said undulating circumferential portions when measured on an outer surface of the tubular wall.

64. (Previously Presented) The stent defined in claim 45, wherein adjacent undulating circumferential portions have substantially the same profile.

65. (Previously Presented) The stent defined in claim 45, wherein adjacent undulating circumferential portions have substantially different profiles.

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Claims 66-128 (Cancelled).

